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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,199	09/25/2003	Jeffrey David Calusinski	AUS920020099US1	6945
34533 7590 08/22/2007 INTERNATIONAL CORP (BLF) c/o BIGGERS & OHANIAN, LLP P.O. BOX 1469 AUSTIN, TX 78767-1469			EXAMINER TIMBLIN, ROBERT M	
			ART UNIT 2167	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Application Number: 10/671,199  
Filing Date: September 25, 2003  
Appellant(s): CALUSINSKI, JEFFREY DAVID

**MAILED**

**AUG 22 2007**

**Technology Center 2100**

INTERNATIONAL BUSINESS MACHINES CORPORATION  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/11/2007 appealing from the Office action mailed 12/12/2006

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2002/0147857 A1	Sanchez, II	10-2002
6,680,618	Fruend	10-1997

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10-18, 20-28 and 30, are rejected under 35 U.S.C. 102(e) as being anticipated by **Sanchez, II et al.** ('Sanchez' hereinafter) (U.S. 2002/0147857 A1).

**With respect to claim 1, Sanchez discloses A method of data processing for objects with unknown data structures, the method comprising:**

**'receiving a processing request for a business object having an unknown business object data structure' as requesting retrieval of an object (0010).**

**'data for the business object is stored in a persistent data store having an unknown persistent data structure' as retrieving an object and the objects included attributes from a LDAP repository (0010).**

'the processing request includes a reference to the business object and a processing instruction' **as a request for the object (0010) and instructions for mapping (0011).**

'inferring the business object data structure from metadata describing the business object' **as determining the persistent attributes of the Java objects (0008).**

inferring the persistent data structure from metadata describing the persistent data structure' **as determining attributes of the LDAP repository (0010).**

'validating the business object data structure with respect to the persistent data structure' **as mapping Java objects to corresponding LDAP attributes (0008).**

'creating a data object structured according to the persistent data structure' **as creating new LDAP data objects according to its attributes (0007 and 0012).**

'transforming data values from the business object to the data object' **as storing the object in a format that is useable (0011 and 0026).**

'applying the processing instruction, with the data object, to the persistent data store' **as mapping the object to the LDAP (0008).**

With respect to claims 2, 12, and 22, **Sanchez** discloses **'the business object is a Java object'** as the objects may be Java objects (abstract).

**'inferring the business object data structure from metadata describing the business object comprises Java reflection'** as using reflection (0008).

With respect to claims 3, 13, and 23, **Sanchez** discloses **'the business object has a class name'** (0041 and 0045).

**'inferring the business object data structure from metadata describing the business object comprises inferring the business object data structure in dependence upon the class name of the business object'** (0043).

With respect to claims 4, 14 and 24, **Sanchez** discloses a **'persistent data store is a table in a database'** (0009) and **inferring the persistent data structure from metadata describing the persistent data structure comprises reading from metadata describing the database'** (0010).

With respect to claims 5, 15, and 25, **Sanchez** discloses **'inferring the persistent data structure comprises identifying the table in dependence upon a class name of the business object'** as distinguishing name (0008).

With respect to claims 6, 16, and 26, **Sanchez** discloses **'determining that there exists a mapping from fields in the business object to fields in the persistent data store'** as existing objects that have had their attributes mapped (0036).

With respect to claims 7, 17, and 27, **Sanchez** discloses **'the mapping comprises a one-to-one correspondence between field names in the business**

**object and field names in the persistent data store'** as mapping the attributes of the objects to the LDAP attributes (0031).

With respect to claims 8, 18, and 28, **Sanchez** discloses **'the mapping comprises an algorithmically-inferred one-to-one correspondence between fields in the business object and fields in the persistent data store'** as using a simple mapping methodology (0031).

With respect to claims 10, 20, and 30, **Sanchez** discloses **'transforming the data values according to the mapping from fields in the business object to fields in the persistent data store'** (0011 and 0026).

Claim 11 contains essentially the same subject matter as that of claim 1, but only differs in being a system rather a method. Therefore claim 11 is rejected for the same reasons as claim 1 above.

Claim 21 contains essentially the same subject matter as that of claim 1, but only differs in being a product rather than a method. Therefore claim 11 is rejected for the same reasons as claim 1 above.

Furthermore, **Sanchez** discloses **'a recording medium'** as a computer readable medium containing instructions (0011).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanchez as applied to claims 1-8, 10-18, 20-28 and 30 above in view of **Freund** (U.S. Patent 5,680,618).

With respect to claims 9, 19 and 29, Sanchez fails to expressly disclose a correspondence, defined in a mapping data structure, between fields in the business object and fields in the persistent data store.

**Freund**, however, discloses ‘a correspondence, defined in a mapping data structure, between fields in the business object and fields in the persistent data store’ as a data base file with supporting index (col. 5, lines 6-7 and fig. 2c).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teaching of **Freund** would have provided Sanchez’s system with establishing relationships between tables by linking corresponding fields (**Freund**, col. 2, lines 7-10).



**(10) Response to Argument**

Appellant's arguments filed 5/11/2007 have been fully considered but they are not persuasive.

Appellant argues (page 8 of the Appeal Brief) that the cited Sanchez does not disclose that data for the business object is stored in a persistent data store having an unknown persistent data structure. The Examiner respectfully disagrees given the following:

Paragraph [0010] of Sanchez was relied upon in the previous Office Action to disclose this claimed limitation.

Specifically, Sanchez discloses retrieving an object from a LDAP (lightweight directory access protocol) repository. The LDAP repository is a persistent repository (Sanchez at paragraph [0003]). Upon retrieving the object from the repository, the location of the object, is determined from the path of the object. Furthermore, persistent attribute values from the location in the LDAP are identified in the path.

The Examiner submits that the determination of the location of the object from the path sufficiently teaches that the structure of the data store is unknown because prior to the retrieving of the object it is not disclosed in Sanchez the knowledge of the persistent data store (i.e. LDAP repository). Put another way, Sanchez does not disclose knowing the structure of the LDAP repository before determining the location of an object. The Examiner submits that the path determining the location of the object defines the structure of the repository. For example, a path essentially shows *how* an

object is stored and *where* it is located in the repository (i.e. structure). Known well in the art, a path describes a directory structure of how to locate data (e.g. files and folders). Once the path of the object is determined, then the structure of the repository is known.

The Examiner's submission above can also be applied well in response to Appellant's argument (see page 10 of the Appeal Brief) that Sanchez does not disclose inferring the persistent data structure from metadata describing the persistent data structure. That is, when the system of Sanchez determines the path of an object it is therefore inferred. This inference is derived from the persistent attributes (i.e. metadata) found in the path (Sanchez at paragraph [0010] and last two lines of paragraph [0008]).

In summary, because Sanchez discloses finding a location of an object by determining its path (i.e. repository structure), that the structure of the repository is realized, therefore making the structure known. Suggestively, prior to determining the path, the structure of the repository is unknown. Furthermore, the attributes in the path are essentially metadata describing the path and therefore the metadata describes the repository structure in Sanchez.

Even more, as Sanchez at paragraph [0010] does not explicitly disclose "structure", "data structure", "inferring the persistent data structure", "metadata", or "inferring the persistent data structure from metadata describing the persistent data structure", it is taught and sufficiently described as Sanchez determines a path (i.e. a structure) from attributes (i.e. metadata) identified by the path.

Appellant also argues (Appeal Brief at page 12) that Sanchez does not disclose validating the business object data structure with respect to the persistent data structure. The Examiner respectfully disagrees given the following:

Paragraph [0008] of Sanchez was relied upon in the previous Office Action to disclose this claimed limitation.

Specifically, Sanchez teaches mapping certain data attributes of objects to corresponding LDAP attributes (paragraph [0008]). By using such a technique as mapping, Sanchez teaches validating because to store objects in a database, the structures of the object and data store have to be validated for a correct correspondence. The Appellant further specifies the claimed validating step in their claim 6 and paragraph 0010 of the disclosure. Specifically, Appellant claims:

*wherein validating the business object data structure with respect to the persistent data structure comprises determining that there exists a mapping from fields in the business object to fields in the persistent data store). (Claim 6).*

As seen, Sanchez sufficiently discloses the validating step as their method also maps attributes of objects to attributes of an LDAP repository (i.e. determining that there exists a mapping...).

The Appellant further argues that Sanchez would not need to disclose validating the business object structure with respect to the persistent data structure. The Examiner disagrees with this statement because to prove that Sanchez does have a need for such a validating step as claimed, it is stated in Sanchez (paragraph [0007]) that because LDAP data objects and their attributes may not directly correspond to an application's Java objects attributes, that mapping needs to be conducted. To make

sure that the objects of the LDAP repository and Java objects do correspond, the attributes of the object are set with the LDAP persistent repository object attribute values (Sanchez, last three lines of paragraph [0010]). In short, validation in Sanchez is needed and disclosed to make sure the Java objects and LDAP objects correspond (i.e. validating the objects to the repository).

Appellant lastly argues (page 16 of the Appeal Brief) that there is no suggestion to combine Sanchez and Freund. The Examiner respectfully disagrees because as stated in the previous Office Action, it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Freund would have given Sanchez's system a way to establish relationship between tables by linking corresponding fields.

For another motivation, Freund shows in figure 5c and col. 5 lines 6-7 how and object (i.e. file) corresponds to a database via a supporting index. The supporting index sufficiently discloses a mapping data structure (i.e. the index showing the correspondence of the file to the database) in which Sanchez fails to explicitly disclose. It would have been beneficial of Sanchez to use this data structure so that a correspondence between objects and a repository can be efficiently identified. Sanchez discloses a need for finding a mapping correspondence (paragraph [0007]). Further, foreign files (i.e. objects with unknown data structures) could be better accessed regardless of their format (Freund at col. 4 line 23-31).

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Patent Examiner AU 2167

8 August 2007


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